

# Completed Return-On-Investment Project Case Study



United States Department of Energy  
Office of Environmental Management  
Fact Sheet

## Green is Clean Waste Program Savannah River Site, South Carolina

### Original Problem

SRS took an overly conservative approach to managing waste generated in Radiological Buffer Areas (RBAs). RBAs are areas surrounding contaminated areas which are maintained in a radiologically clean condition. They serve as barriers for contamination control and reducing employee exposure to radiation. Past practice was to manage all RBA waste as low level waste.



### The ROI Project Solution

A benchmarking trip to commercial nuclear power plants in 1995, SRS selected Green is Clean (GIC) as one of the waste minimization techniques that could be easily implemented. As part of the GIC program, clean receptacles were provided in RBAs for disposal of waste having no potential for contamination. The program also encompassed the survey and release of nonroutinely generated materials that would otherwise have been disposed of as low level waste.

### Value Of Improvement

The GIC program reduced low level waste volume by more than 15%, reduced disposal cost by approximately \$100 per cubic foot, contributed to the extended life of existing disposal facilities and delayed the construction of expensive low level waste disposal vaults.

#### Lifecycle Waste Reduction

Life Cycle Waste Reduction	7,787 m3
Operation Commencement Date	1995
Project Useful Life (Years)	10

#### DOE Monetary Benefits

Cost	\$2.2M
Lifecycle Savings	\$29 M
Return on Investment	120 %

### Benefits At-A-Glance

- Implemented Green is Clean in more than 40 facilities onsite, reducing LLW volume by 15%
- Improved miss segregation from 1 in 1,000 bags in 1995 to 1 in over 3,000 bags in 1999.
- Stopped shredding associated waste in 1999 leading to direct controlled disposal in onsite sanitary landfill

## Green is Clean Waste Program

### Savannah River Site, South Carolina

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#### Summary Data

<b>ROI Priority Area:</b>	<b>Waste Management</b>
<b>ROI Project Type:</b>	<b>Source Reduction</b>
<b>Project Cost:</b>	<b>\$2.2 M</b>
<b>Lifecycle Savings:</b>	<b>\$29 M</b>
<b>Implementing Group:</b>	EM
<b>Benefiting Group:</b>	EM
<b>Useful Life Years:</b>	<b>10</b>
<b>Return On Investment:</b>	<b>120 %</b>
<b>Lifecycle Waste Reduction:</b>	<b>7,787 m3 of LLW</b>
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Revision 0, Prepared June 8, 2000